



# Amherst Department of Public Works Strategic Plan FY18 – FY25

# Department of Public Works

## Mission Statement

- To effectively and efficiently manage the infrastructure placed in our care (travel ways, facilities and common grounds) so that residents have convenient access to safe and durable assets throughout the town.

## Vision Statement

- To reinvest in and upgrade our roads, bridges, municipal buildings and common grounds in compliance with all federal, state, local and historic codes and regulations.
- To manage stormwater, solid waste and municipal septic in compliance with all applicable regulations.

# Refining the Path Previously Presented

Strategic plans submitted in 2014 and twice updated including:

- Specific individual goals with initiatives and paths to achieve those expectations.
- The original plan identified goals in 6 areas.
  1. Road repairs/reconstruction
  2. Staffing needs
  3. Equipment needs
  4. Building needs
  5. Road Bond
  6. Bridge Bond

# Revised Targeted Outcomes:

- Outcome #1: Roads:
  - *70% or greater of Amherst roads are rated good according to industry standard (pavement condition index (PCI)) by 2030.*
- Outcome #2: Bridges
  - *By 2025, all Amherst bridges/water crossings are built and maintained to last 50+ years.*
- Outcome #3: Town Buildings
  - *By 2025 all Amherst town buildings and outbuildings are functionally sound and compliant with all appropriate regulations and codes.*
  - *Strategic analysis and proposal for all town buildings including DPW facilities is completed in FY18 by a multi-disciplinary group, including residents.*
- Outcome #4: DPW Management Systems
  - *By 2020, Amherst DPW will achieve work force productivity of 90%.*
- Outcome #5: Stormwater
  - *Amherst will continue to comply with evolving requirements of the Clean Water Act under the Municipal Separate Storm Sewer System permit issued by the EPA.*

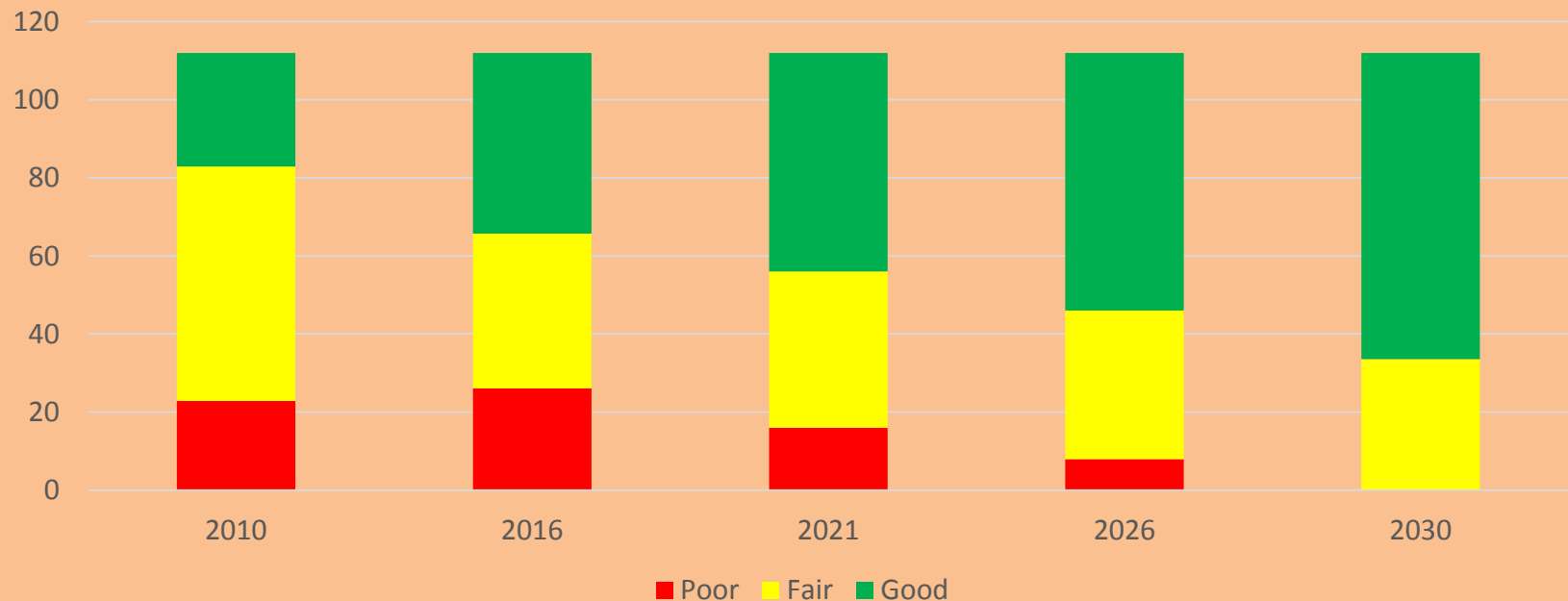
# ROADS

*70% or greater of Amherst roads are rated good according to industry standard pavement condition index (PCI) by 2030.*

# Shifting the Balance of Road Ratings

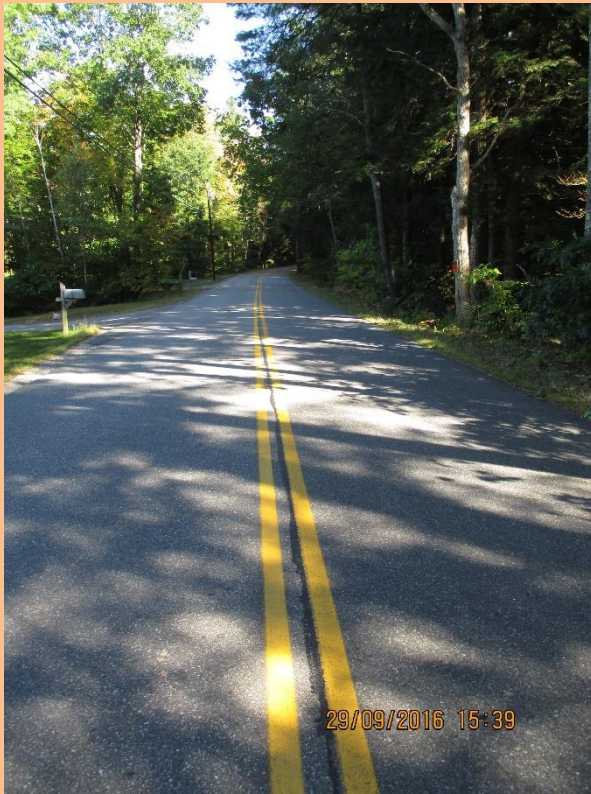
To attain a Town wide rating with 70% of roads rated as good or better we need to rehabilitate or reconstruct our deficient roads at an average rate of 6 miles per year for the next 14 years.

Amherst road ratings (in miles) 2010 - 2030



# Road Rating Examples

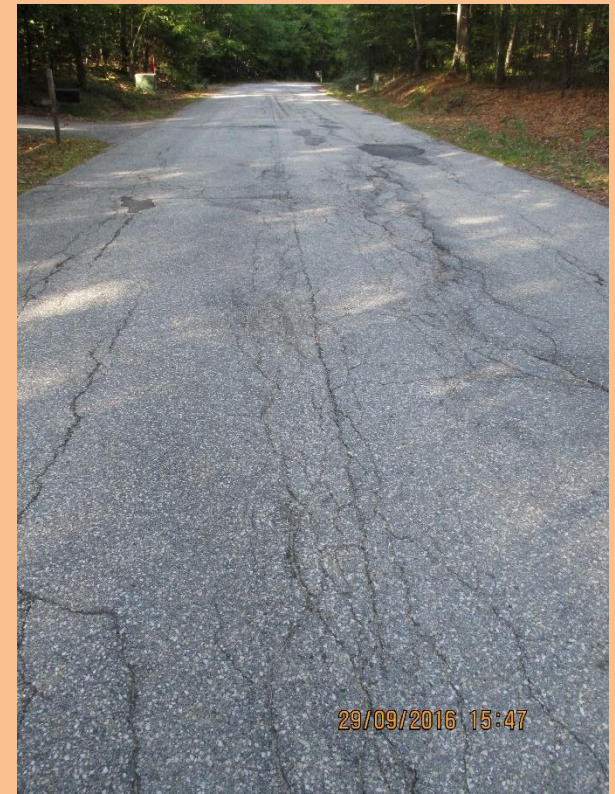
Good



Fair



Poor

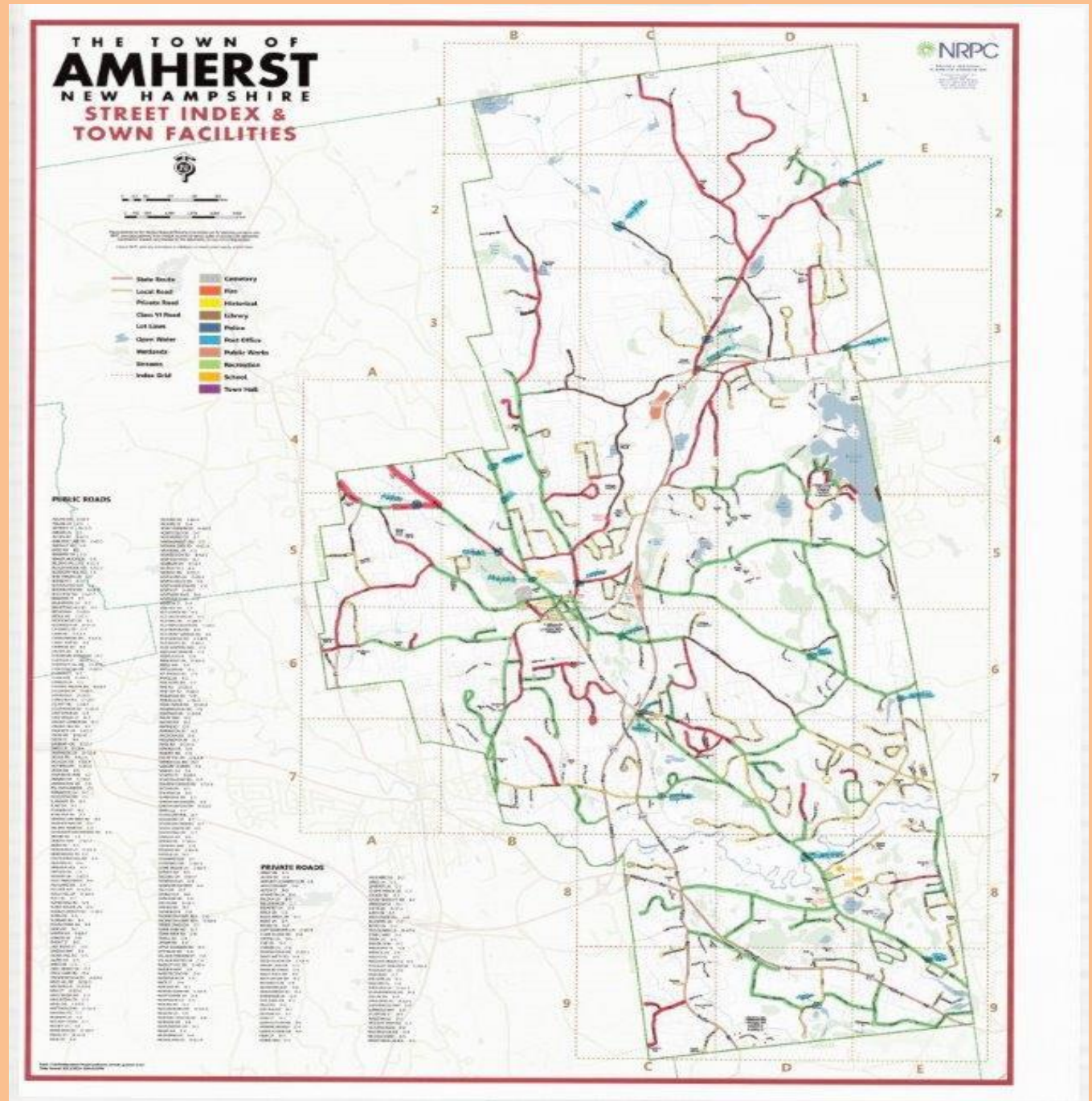


# Current Status of Amherst Roads

Good: 46 miles  
41.3%

Fair: 40 miles  
35.4%

Poor: 26 miles  
23.3%



# Road Categories for Costs

The general categories of road construction dollars:

1. Engineering
2. Tree Removal
3. Drainage
4. Road Base
5. New Asphalt
6. Shoulders and Safety Considerations
7. Landscaping

# Total Road Costs Through 2030

The proposed 14-year rehabilitation/reconstruction program will require \$2.5 million per year in 2016 dollars.

Strategy	Miles of Road	Cost
Road Reconstruction	26.1	\$ 33,650,000
Road Maintenance	39.4 46.5	\$ 15,400,000
Estimated total	112	\$ 49,050,000

# Road Funding Options

1. Continue bonding at the rate of \$2.4 million/yr. to cover the \$33.6 million of road reconstruction and increase the current annual road maintenance budget from \$0.9 million to \$1.1 million.
2. Increase the annual road maintenance budget from \$0.9 million to \$3.5 million.
3. Ramp up the annual road maintenance budget from \$0.9 million to \$3.5 million over several years. (This will extend the 2030 target date.)

# Bridges

*By 2025, all Amherst bridges and water crossings will be built and maintained to last 50+ years.*

# Bridges

There are 19 bridges in Amherst.

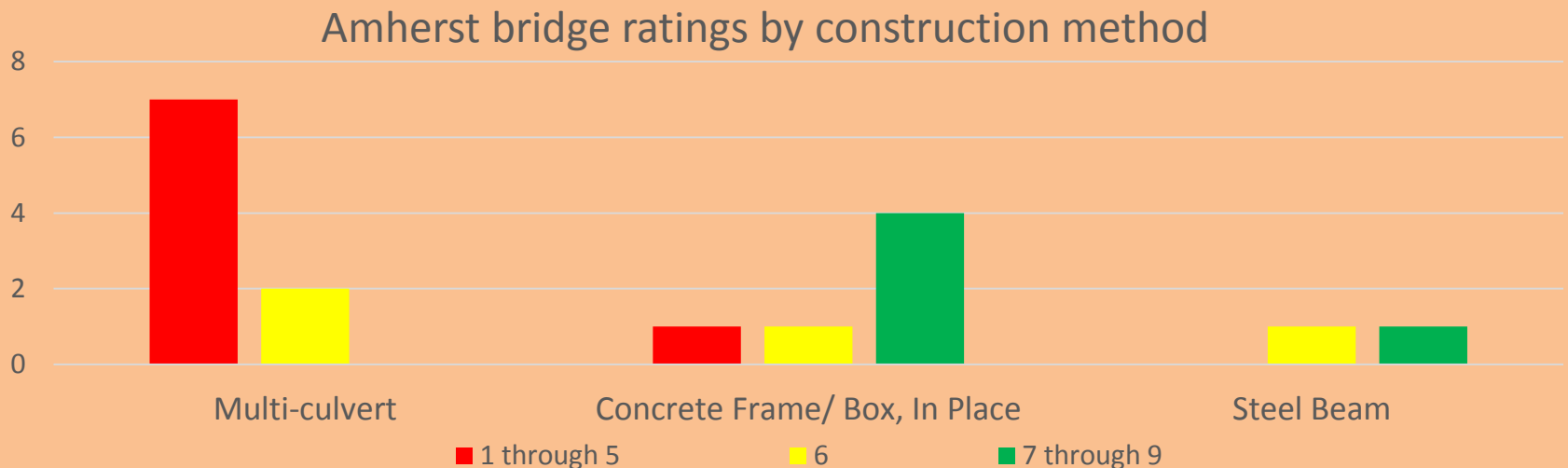
- 2 are permanently closed. Not included in charts.
- 14 are NH DOT defined bridges.
- 3 are Town of Amherst water crossings.

# NH DOT Rating Table for Bridges

9	Excellent Condition
8	Very Good Condition
7	Good Condition
6	Satisfactory Condition
5	Fair Condition
4	Poor Condition
3	Serious Condition
2	Critical Condition
1	Imminent Failure Condition
0	Failed Condition

# Bridges by Construction Method

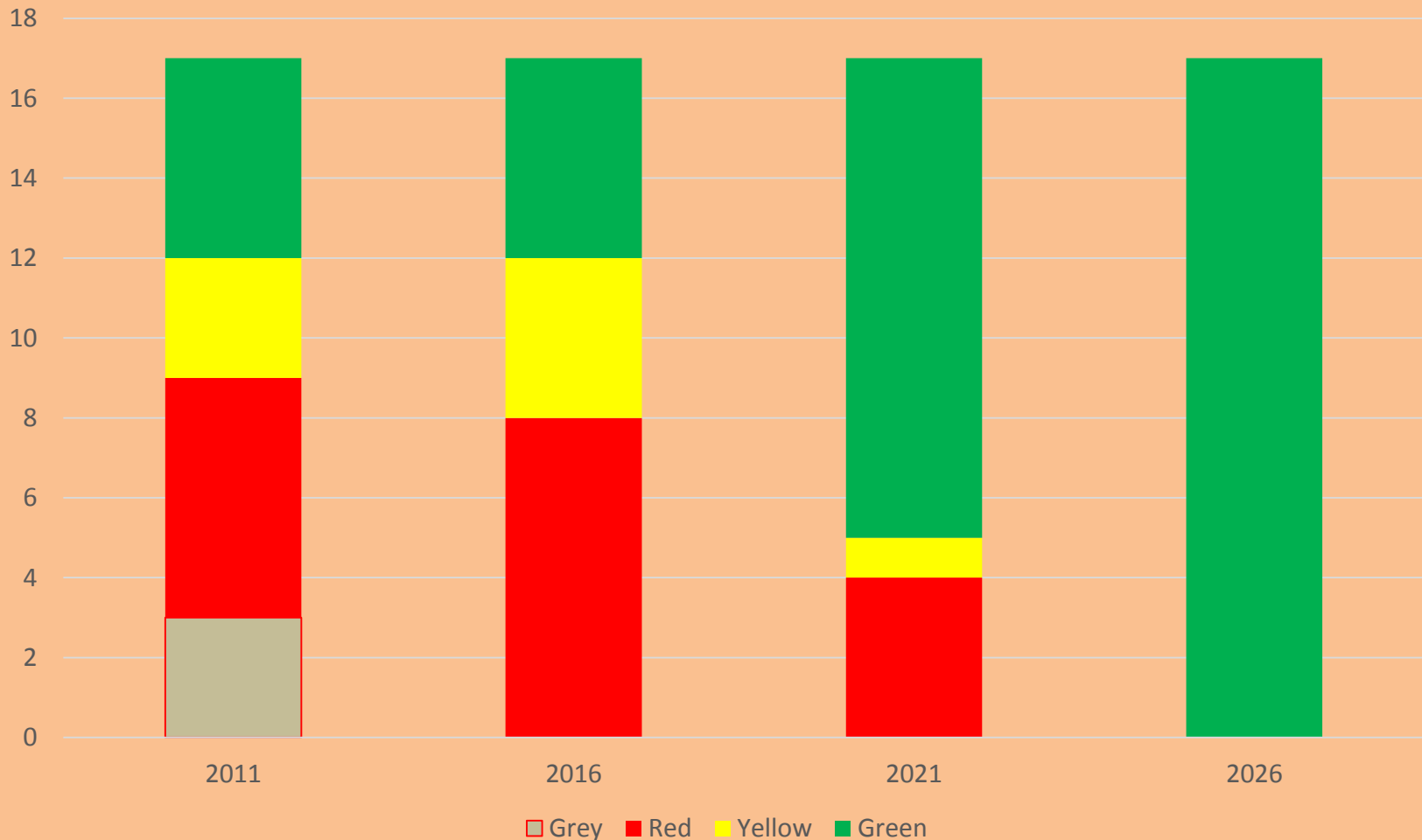
- 9 are multi-culvert design, of which 7 are at risk of failure.
  - 4 qualify for the state bridge replacement program.
  - 3 are town responsibility.



- By 2025 all at risk steel multi-culvert crossings will be replaced with Concrete Box or Beam.
- The remainder of bridges will be up-rated by maintenance.

# Shifting the Balance of Bridge Condition

Amherst Bridge Condition



# Total Bridge Cost Through FY26

(in 1000's of Dollars)

	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Totals
Design/Construction State Estimated		756	1666		1098	1,980		960		6,460
State Funding Program Continues. Up Front 40%		(302)	(666)		(439)	(792)		(384)		(2,583)
State Funding Program Continues. Post Construction 40%			(302)	(666)		(439)	(792)		(384)	(2,583)
Amherst Out of Pocket Costs (20%)		151	333		220	396		192		1,292
Amherst Multi-culvert Replacement Program	100	100	100							300
Amherst Maintenance Program	15	15	15	15	15	15	15	15	15	135
Amherst Total Costs	115	266	448	15	235	411	15	207	15	1,727
Amherst Total Cost if State Funding Program Discontinued	115	871	1,781	15	1113	1,995	15	975	15	6,895






















































Under state funding program Amherst can upgrade all bridges by 2025 for \$1.73M.

# Town Buildings

*By 2025 all Amherst town buildings and outbuildings are functionally sound and compliant with all appropriate regulations and codes.*

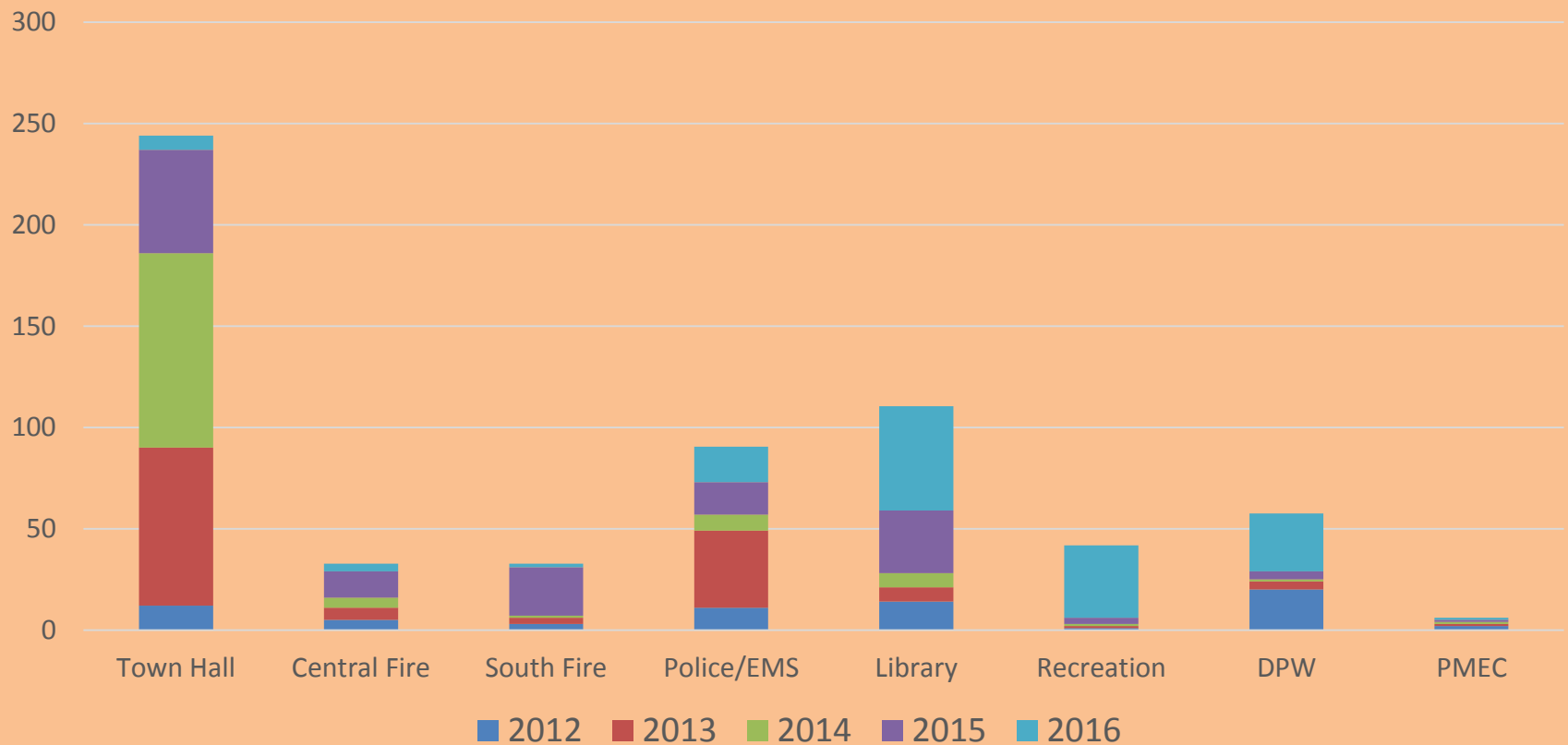
*Strategic analysis and proposal for all town buildings including DPW facilities is completed in FY18 by a multi-disciplinary group, including residents.*

# Town Buildings Current Conditions

	Town Hall	Central Fire	South Fire	Police/EMS	Library	Recreation	DPW
Structure/Shell							
Heating							
Air Conditioning							
Work/Mtg. Spaces							
Sanitary Systems							
Utilities							
Storage Spaces							
Grounds/Drainage							

# Town Buildings

Dollars Spent From Budget FY 12 – 16 ( in 1000's)



# Town Buildings Required Work

- Town Hall
  - Brick work restoration, windows and door and interior side hallway rehabilitation, intrusion detection enhancements.
- Fire Rescue (Central and South)
  - Doors, limited window and fascia and trim board replacement.
- Police/EMS
  - Rear siding replacement and fascia boards and as air conditioning units fail upgrades for eliminating Freon refrigerant. Safety Complex drainage.
- Library
  - As Air Conditioning units fail they will require upgrades to eliminate Freon refrigerants, paint soffits now.
- Recreation
  - Extensive board/batten siding work, window replacements, bulkhead and drainage improvements and Air conditioning unit upgrades for eliminating Freon refrigerants..
- DPW
  - Continuation of the salt spreader hanger bays, mechanics garage, salt barn .

# Town Buildings

- Town building needs, especially DPW – form a committee to include residents for strategic facility upgrade and costs.
- Police/Fire Rescue Complex drainage - develop a warrant article for \$175K.
- Other repairs – phase in an increase of \$40K to the maintenance line. Plan for, and schedule repairs within budget.

# DPW Management Systems

*By 2020 Amherst DPW will achieve work force productivity of 90%.*

# DPW Management Systems

The Town commissioned a Management and Operations Study of the Department of Public Works, that was published in October of 2015.

Several recurring themes of recommendations revolved around purchasing and implementing a Computerized Maintenance Management System (CMMS.)

Other categories of recommendations will more easily be implemented following enactment of CMMS. Foremen and Crew engagement and decision making.

The report notes a negative public perception issue around productivity.

# DPW Management Systems

Computerized Maintenance Management System software will provide intelligence and insight into the following areas:

- Buildings and grounds
- Vehicles
- Crew productivity in all areas of work
- Cost tracking and analysis

Following implementation and data acquisition we will be able to not only make productivity improvements but also improve public perception.

# DPW Management Systems

## Implementation Plan:

Purchase and install software and hardware in current budget with additional equipment and modules in future fiscal years.

## Cost estimates:

- Year 1 software system and tablets  $\approx$  \$17,000.
- Subsequent annual licensing fee  $\approx$  \$ 8,000.

# Stormwater

*Amherst will continue to comply with evolving requirements of the Clean Water Act under the Municipal Separate Storm Sewer System permit issued by the EPA.*

# Stormwater

- Since 2008 the EPA has warned that the 2003 stormwater permit will soon be updated with more stringent requirements.
- The New Hampshire permit is on track for issue in December 2016.
- As an interim solution the DPW took on Stormwater in 2003.
- Since 2003 we have been complying by:
  - Hiring CLD to write a Storm Water Management Plan (SWMP)
  - The DPW workforce has mapped inlet and outlet points, taken periodic river/lake water samples, taken quarterly transfer station runoff samples, developed public education material and submitted reports to NH DES and Federal EPA.

# Stormwater – Updated 2016 Permit

- Stormwater needs to migrate to a different town department.
- Stormwater, represents an engineering, economic, and manpower need.
- Once issued, the following applies to Amherst:
  - A Notice of Intent (NOI) shall be submitted to EPA within 90 days of effective date of permit, to include:
    - Documentation of eligibility regarding Endangered Species.
    - Certify eligibility regarding documentation of historic properties.

# Stormwater – Updated 2016 Permit

Within the first year of effective date, Amherst must submit a new Storm Water Management Plan (SWMP) to the EPA.

- SWMP is a document used to describe and detail the implementation of activities and measures to comply with permit.
- SWMP shall accurately describe the permittee's plans and activities.
- Baboosic Lake, Stump Pond and Souhegan River are designated impaired and require remediation plans. Positive benefits are accrued for Baboosic Lake from the Baboosic Lake Community Septic System.

# Stormwater Overview

- The focus of the SWMP is to describe how Amherst will reduce the discharge of pollutants from its sewer system and addresses these program areas:
  - Construction site runoff control
  - Illicit discharge detection and elimination
  - Pollution prevention/Good housekeeping
  - Post construction runoff control
  - Public education and outreach
  - Public involvement/Participation

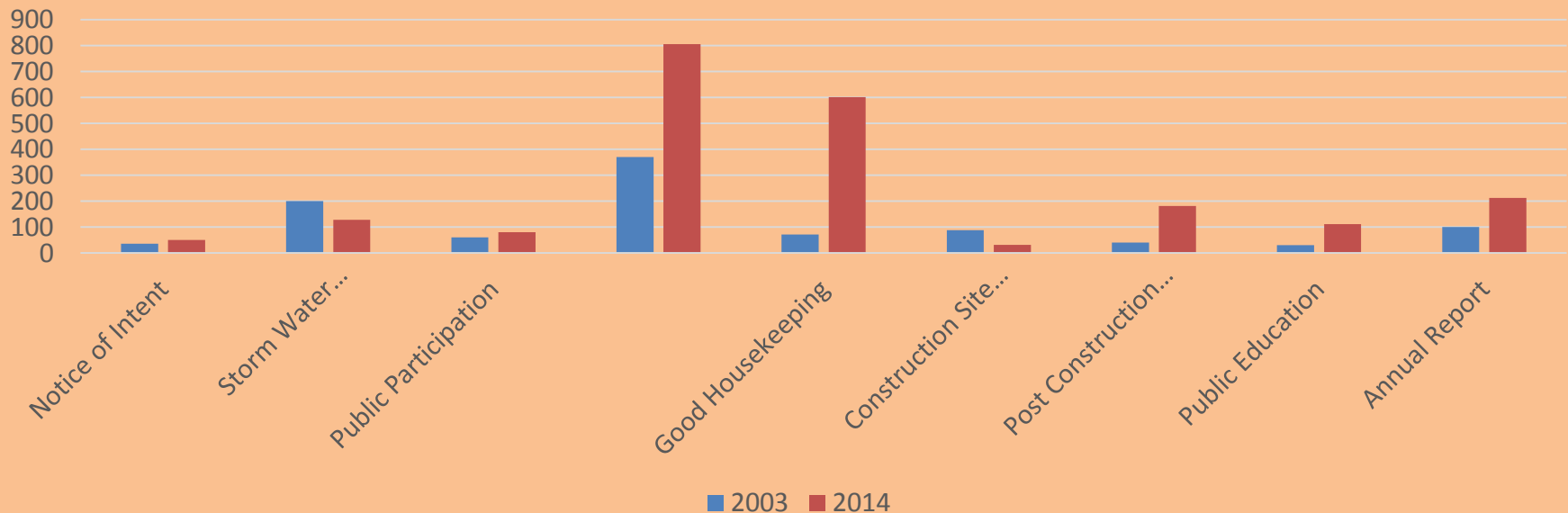
# Stormwater

- Current Stormwater Budget;
  - \$25K is currently budgeted. \$18K for wages, sample analysis and projects and \$7K in incremental costs. The total covers water testing, outfall and mapping documentation, computer work and reporting.
- Projected Stormwater Needs;
  - \$80K above current budget is our projection. Plus transferring the DPW Stormwater line funding, when appropriate with new permit. To be used for additional staffing or outsourced engineering or some combination of both.

# Stormwater Increased Man-hours

- The most recent EPA data published in 2014 has estimated man-hour needs for the new permit. Of the four community categories listed, Suburban Low is most applicable to Amherst.
- 221% increase in man-hours to be expended. (2205 vs 996)

2014 EPA estimated man-hours by targeted effort area for suburban low



# Stormwater Compliance Strategies

- \$80,000 should be added to the existing contingency fund for the purpose of supporting stormwater compliance when the permit is issued.
- Stormwater needs to be moved from DPW to Community Development. The permit will contain:
  - Land use and planning impacts.
  - Requires detection, enforcement and public engagement.
  - DPW activities (as well as other departments) will require oversight, with potential conflict of interest.

# DPW Strategic Initiatives Cost

	FY-18	FY-19	FY-20	FY-21	FY-22	FY-23	FY-24	FY-25	FY-26
	In 1,000's of \$								
Roads									
Reconstruct	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Maintenance	200	200	200	200	200	200	200	200	200
Bridges	115	266	448	15	235	411	15	207	15
Town Buildings	10	20	30	40					
Safety Complex	175								
DPW Management Systems	8	8	8	8	8	8	8	8	8
Stormwater									
Contingency	80	80	80	80	80	80	80	80	80
Totals	2,988	2,974	3,166	2,743	2,923	3,099	2,703	2,895	2,703

Questions?